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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BLOOM, NATHAN J

ART UNIT

PAPER NUMBER

2624

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/572,820	Applicant(s) GOMILLA ET AL.	
	Examiner NATHAN BLOOM	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicants' response to the last Office Action, filed on July 14th, 2010 has been entered and made of record.

Priority

1. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 119(e) as follows:

The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application). The disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

The disclosure of the prior-filed application, Provisional Application No. 60/505146, fails to provide adequate support or enablement in the manner provided by the first paragraph of 35 U.S.C. 112 for one or more claims of this application. In particular, the requirement of independent claims 1 and 8 along with their respective dependents require the computation of an average value of at least one image parameter and the selection of a film grain block based on the average value of the image parameter. The disclosure provided by the priority document only discloses the calculation of image statistics on page 3 of the document. Additionally, page 2 of the provisional priority document's disclosure has discussed the "Background Art" and discloses

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the selection of film grain parameters (characteristics), that are used to describe the film grain, based on an average intensity of the blocks (see figures 1-3), but does not teach the use of an average parameter to select film grain blocks closely matching the parameter of the input image block as required by the current claim language. However, the limitations are supported by the corresponding 371 application PCT/US04/29410, and thus claims 1-14 of the current application will have an effective filing date of 09/10/2004 (date of the PCT/US04/29410 application).

Response to Arguments and Amendments

2. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Cooper et al. (US 2007/0117291).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C.

102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37

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CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Instant claim 1: A method for simulating film grain in an input image block, in which film grain has been at least partially filtered out, comprising the steps of:

(a) computing an average value of at least one image parameter for the block; [*Item 22 of Figure 2 depicts the calculation of the average of the luminance of the input block.*]

(b) selecting a film grain block from at least one previously established pool of film grain blocks [*Paragraphs 0016-0017 have taught the generation of a pool of film grain blocks prior to the selection step (see Figure 1).*] whose image parameter most closely matches the average value of the image parameter of the input image block; [*Cooper has taught the selection of a film grain block from a pool of film grain blocks that corresponds (most closely matches) to the average of luminance intensity parameter (paragraph 0010).*]

(c) blending the selected film grain block with the input image block. [*Paragraphs 0009-0010 have taught the blending of the film grain block to the input image block.*]

Instant claim 2: The method according to claim 1 further comprising the step of de-blocking the selected film grain block prior to blending with the input image block. [*Cooper has taught the deblocking of the blocks prior to blending (paragraph 0029).*]

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Instant claim 3: The method according to claim 1 wherein the previously established film grain blocks are organized in the at least one pool based on image intensity. *[Film grain blocks are parameterized and placed (“organized”) into pools based on intervals of intensity of the film grain pattern (paragraphs 0016-0017).]*

Instant claim 4: The method according to claim 1 further including the step of updating the at least one pool in accordance with characteristics of the input image. *[As indicated by paragraphs 0016-0020 the pool of film grain blocks is initialized upon receipt of the SEI message preceding the image I, and is further scaled (updated – to update is to change or adjust) based on the associated message (characteristic) with the image I.]*

Instant claim 5: The method according to claim 3 where a different film grain block is selected for at least one of a different color component. *[The color space of the current set of film grain blocks, taught by Cooper, is limited to the luminance channel. However, the claim language only requires that a film grain block other than one of the other film grains blocks is selected from a different color component, but does not describe what the color is different from or that the color of one block must be different than the other. Thus the claim is being read as the selection of a film grain block having a color (luminance) different than some color component (chromacity, RGB, etc...) that doesn't necessarily correspond to colors contained within the set of blocks described by Cooper. Since Cooper has taught at least the luminance component, and thus color component is different from at least some other color component such Red Chrominance, then Cooper has met the limitations of the currently presented claim.]*

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Instant claim 6: The method according to claim 1 further including the step of transforming the selected block prior to the blending step. [*Blocks are decoded (transformed) prior to the blending step, see paragraph 0029 that refers to the decoded image pixel (implying that the block has been decoded).*]

Instant claim 7: The method according to claim 1 further comprising the step of selecting a film grain block from among a plurality of pools of film grain blocks. [*Paragraphs 0016-0017 have taught the selection of one of a plurality of film grain blocks per intensity interval. Therefore, Coopers has taught a plurality of sets (sub-pools) of film grain blocks contained within the larger pool of film grain blocks.*]

Instant claim 8: A method for simulating film grain in an input image from which the film grain has at least been attenuated and been decomposed in into input image blocks, comprising the steps of:

(a) selecting a successive one of a set of input image blocks; [*See the discussion of claim 1.*]

(b) computing an average value of at least one image parameter for the successive block; [*See the discussion of claim 1.*]

(c) selecting, from among at least one pool of previously established film grain blocks, a film grain block having image parameter most closely matches the average value of the at least one image parameter of the successive block; [*See the discussion of claim 1.*]

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(d) repeating steps (a)-(c) for all the pixel blocks in the image; and [*See figure 2 of Cooper, wherein the operations are performed "per block" of the image and "per pixel" of the image.*]

(e) blending the selected film grain blocks to yield an output image with film grain. [*See the discussion of claim 1.*]

Instant claim 9: The method according to claim 8 wherein the previously established film grain blocks are organized in the at least one pool based on image intensity. [*As per the discussion of claim 3 this limitation has been taught.*]

Instant claim 10: The method according to claim 8 further including the step of updating the at least one pool of pre-established film grain blocks in accordance with characteristics of the input image. [*As indicated by paragraphs 0016-0020 the pool of film grain blocks is initialized upon receipt of the SEI message preceding the image I, and is further scaled (updated – to update is to change or adjust) based on the associated message (characteristic) with the image I.*]

Instant claim 11: The method according to claim 8 where a different film grain block is selected for at least one of a different color component. [*As per the discussion of claims 1, 5, and 8, the limitations of this claim have been taught by the cited prior art.*]

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Instant claim 12: The method according to claim 7 further including the step of transforming the selected block prior to repeating steps (c)-(d). [*As per the above discussion of claims 8 and 6, these limitations have been taught by Cooper.*]

Instant claim 13: The method according to claim 8 further comprising the step of selecting a film grain block from among a plurality of pools of film grain blocks. [*See the discussion of claim 7.*]

Instant claim 14: The method according to claim 8 further comprising the step of de-blocking the successive film grain block prior to repeating steps (c)-(d). [*As per the above discussion of claims 8 and 2, these limitations have been taught by Cooper.*]

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Boyce et al. (US 2007/0070241) – similar to Cooper et al. reference (same assignee, similar invention, 35 USC 102e date).
- Jia et al. (US 7593465) - (not prior art) similar to claimed invention, but does not teach the calculation of an average image parameter except to create a scaling factor used in modifying the image noise.

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6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Bloom whose telephone number is 571-272-9321. The examiner can normally be reached on Monday through Friday from 10:00 am to 6:30 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vu Le, can be reached on 571-272-7332. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/NATHAN BLOOM/
Examiner, Art Unit 2624

/Vu Le/
Supervisory Patent Examiner, Art Unit 2624